

CLAIMS

1. A liquid crystal display, comprising:
liquid crystal display elements having a pair of substrates with a liquid crystal therebetween having a spontaneous polarization; and
an electrode corresponding to a pixel and a switching element that are placed on an inner surface of one of the substrates, the switching element being allowed to drive the liquid crystal corresponding to a pixel when turned on,
wherein the spontaneous polarization of the liquid crystal is a magnitude of not more than $1/2$ of a maximum quantity of charge that is injected to the liquid crystal display element corresponding to a pixel when the switching element is turned on.

2. The liquid crystal display according to claim 1, wherein the liquid crystal has a relative dielectric constant of not less than 3.

3. The liquid crystal display according to claim 1, further comprising:
a back-light for emitting white light; and
color filters of three primary colors placed between the substrates,

wherein the emitted light is selectively transmitted through the color filters of the three primary colors so as to carry out a color display

4. The liquid crystal display according to claim 1,
further comprising:

a back-light having light sources for respectively
emitting light rays of three primary colors,

wherein the light sources are allowed to emit light rays
in a time divided manner in synchronism with ON/OFF driving
processes of the switching element so as to carry out a color
display.

5. The liquid crystal display according to claim 1,
wherein the spontaneous polarization of the liquid crystal is a
magnitude of not more than 15 nC/cm^2 .

6. The liquid crystal display according to claim 5,
wherein the liquid crystal has a relative dielectric constant
of not less than 3.

7. The liquid crystal display according to claim 5,
further comprising:

a back-light for emitting white light; and

color filters of three primary colors placed between the
substrates,

wherein the emitted light is selectively transmitted
through the color filters of the three primary colors so as to
carry out a color display.

8. The liquid crystal display according to claim 5,
further comprising:

a back-light having light sources for respectively

emitting light rays of three primary colors,

wherein the light sources are allowed to emit light rays in a time divided manner in synchronism with ON/OFF driving processes of the switching element so as to carry out a color display.

9. The liquid crystal display according to claim 1, wherein the spontaneous polarization of the liquid crystal is a magnitude of not more than 10 nC/cm^2 .

10. The liquid crystal display according to claim 9, wherein the liquid crystal has a relative dielectric constant of not less than 3.

11. The liquid crystal display according to claim 9, further comprising:

a back-light for emitting white light; and

color filters of three primary colors placed between the substrates,

wherein the emitted light is selectively transmitted through the color filters of the three primary colors so as to carry out a color display.

12. The liquid crystal display according to claim 9, further comprising:

a back-light having light sources for respectively emitting light rays of three primary colors,

wherein the light sources are allowed to emit light rays in a time divided manner in synchronism with ON/OFF driving

processes of the switching element so as to carry out a color display.

13. The liquid crystal display according to claim 1, wherein the spontaneous polarization of the liquid crystal is a magnitude of not more than 7 nC/cm^2 .

14. The liquid crystal display according to claim 13, wherein the liquid crystal has a relative dielectric constant of not less than 3.

15. The liquid crystal display according to claim 13, further comprising:

a back-light for emitting white light; and

color filters of three primary colors placed between the substrates,

wherein the emitted light is selectively transmitted through the color filters of the three primary colors so as to carry out a color display.

16. The liquid crystal display according to claim 13, further comprising:

a back-light having light sources for respectively emitting light rays of three primary colors,

wherein the light sources are allowed to emit light rays in a time divided manner in synchronism with ON/OFF driving processes of the switching element so as to carry out a color display.